

Applicants: Graham P. Allaway et al.

Serial No.: 09/888,938

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**Exhibit 4**

Applicants: Virginia Litwin et al.  
Serial No.: Not Yet Known  
Filed: October 5, 2006  
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**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

- 1-39. (Canceled)
40. (New) A monoclonal antibody or portion thereof effective to (a) specifically inhibit 67% or greater of fusion of a CD4+ PM-1 cell to a HeLa cell expressing envelope glycoprotein from HIV-1<sub>JR-FL</sub>, and (b) inhibit 18% or less of fusion of a CD4+ SUP-T1 cell to a HeLa cell expressing envelope protein from HIV-1<sub>LAI</sub>, wherein the antibody (i) does not crossreact with HIV-1 envelope glycoprotein or CD4, (ii) reacts with an antigen on the surface of a PM-1 cell having an approximate molecular weight of 44 kD, (iii) does not react with an antigen on the surface of a SUP-T1 cell, and (iv) is at least as active as monoclonal antibody PA-7 produced by the hybridoma designated PA-7 (ATCC Accession No. PTA-6638) in inhibiting fusion as recited in (a) above and less active than monoclonal antibody PA-6 produced by the hybridoma designated PA-6 (ATCC Accession No. PTA-6637) in inhibiting fusion as recited in (b) above, so as to thereby inhibit HIV-1 infection of the CD4+ cell.
41. (New) The monoclonal antibody of claim 40, wherein the monoclonal antibody is a chimeric monoclonal antibody.
42. (New) The monoclonal antibody of claim 40, wherein the monoclonal antibody is humanized.

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43. (New) The monoclonal antibody of claim 40, wherein the monoclonal antibody is a human monoclonal antibody.
44. (New) The monoclonal antibody of claim 40, wherein the portion of the monoclonal antibody is a single chain antibody or an antigen binding fragment.
45. (New) The monoclonal antibody of claim 40, wherein the monoclonal antibody is labeled with a detectable marker.
46. (New) The monoclonal antibody of claim 45, wherein the detectable marker is a radioactive isotope, enzyme, dye or biotin.
47. (New) The monoclonal antibody of claim 40, wherein the CD4+ cell is present in the subject and the contacting is effected by administering the monoclonal antibody or portion thereof to the subject.